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March 1, 2000

Ms. Bonnie Lavelle
Remedial Project Manager
EPA Region VIII
999 18th Street, Suite 500
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REF: RAC No. 68-W7-0039, WA No. 004-RICO-089R

SUBJECT: Subcontracted Laboratory Quality Assurance Program Review

Dear Bonnie:

As part of the VB/I-70 Project Planning and Support task, MK has completed and is submitting the review of quality assurance programs for subcontracted analytical laboratories. MK has contracted the analytical services of Paragon Analytics and Severn Trent Laboratories to support all of our EPA Response Action Contract work assignments. DataChem Laboratories and Columbia Analytical Services also have been used to support the VB/I-70 work assignment on an individual purchase order basis.

In accordance with the RAC Data Acquisition Plan (MK, 02/16/99, Sect. 5.1), laboratories were selected based on price, necessary experience, equipment and personnel, quality assurance program, financial capabilities, ability to meet schedule and delivery requirements, ability to satisfy administrative requirements, and ability to meet environmental and health and safety requirements. Subcontracted laboratories procedures were evaluated to ensure they follow good laboratory practices (GLP) guidelines and that practices are consistent with the VB/I-70 and other MK RAC project requirements.

Paragon Analytics

Paragon Analytics has been selected for their capabilities to analyze volatile organics, semi-volatile organics, total extractable petroleum hydrocarbons, total volatile petroleum hydrocarbons, metals and ions, RCRA characteristics, and radionuclides. The Quality Assurance Manager (QAM) has 3-plus years experience as QAM at Paragon. Procurement of materials and services for use in analytical processes and traceability of standards meet the VB/I-70 QAPP (ISSI, 8/4/99) Sect. 4.11 criteria. The employee training program meets the VB/I-70 QAPP Sect. 4.5 criteria. In accordance with RAC QAPP (MK, 02/11/99, Sect. B3), sample handling

MORRISON KNUDSEN CORPORATION

Bonnie Lavelle

March 1, 2000

Page 2

procedures and custody requirements are acceptable. The MDLs for arsenic by EPA Method 6010 in soil and water are 0.248 mg/kg and 0.002 mg/L respectively. The MDLs for lead by EPA Method 6010 in soil and water are 0.136 mg/kg and 0.0007 g/L respectively. The analytical procedures are performed according to established analytical methods. Laboratory QC requirements meet RAC QAPP Sect. B5.2 criteria. The data verification/validation process is consistent with VB/I-70 QAPP Sect. 4.13; however, the QAM reviews only a random sampling of data reports (normally the QAM reviews/audits 5-10% of the data packages). The analyst is required to perform the data verification/validation process. Paragon follows SW-846 standard procedures for initial and continuing calibrations that are outside control limits. Their Corrective Action Policy meets the VB/I-70 QAPP criteria. MK has received a competent QAPP from Paragon Analytics.

Severn Trent Laboratories

Severn Trent Laboratories has been selected for their capabilities to analyze volatile organics, semi-volatile organics, total extractable petroleum hydrocarbons, total volatile petroleum hydrocarbons, metals and ions, RCRA characteristics, and radionuclides. The QAM has 1-plus years experience as QAM at Severn Trent Laboratories. Procurement of materials and services for use in analytical processes and traceability of standards meet the VB/I-70 QAPP Sect. 4.11 criteria. The employee training program meets the VB/I-70 QAPP Sect. 4.5 criteria. In accordance with RAC QAPP Sect. B3, sample handling procedures and custody requirements are acceptable. The MDLs for arsenic (EPA 6010) in soil and water are 0.30 mg/kg and 0.009 mg/L respectively. The MDLs for lead (EPA 6010) in soil and water are 0.30 mg/kg and 0.003 mg/L respectively. The analytical procedures are performed according to established analytical methods. Laboratory QC requirements meet RAC QAPP Sect. B5.2 criteria. The data verification/validation process is consistent with VB/I-70 QAPP Sect. 4.13. Severn Trent Laboratories follows SW-846 standard procedures for initial and continuing calibrations that are outside control limits. Their Corrective Action Policy meets the VB/I-70 QAPP criteria. MK has received a competent QAPP from Severn Trent Laboratories.

DataChem Laboratories

DataChem Laboratories has been selected for their capabilities to analyze personal air samples and dust performance evaluation samples for lead and arsenic. The QAM has 2 years experience as QAM at DataChem. The procurement of materials and services for use in analytical processes and traceability of standards meet the VB/I-70 QAPP Sect. 4.11 criteria. The employee training program addresses requirements of the VB/I-70 QAPP Sect. 4.5. In accordance with RAC QAPP Sect. B3, sample handling procedures and custody requirements are acceptable. The MDLs for arsenic (EPA 6010) in soil and water are 0.124 mg/kg and 0.003 mg/L, respectively. The MDLs for lead (EPA 6010) in soil and water are 0.213 mg/kg and 0.001 mg/L, respectively. DataChem performs laboratory analyses according to established analytical methods. Laboratory QC requirements meet RAC QAPP Sect. B5.2 criteria. The data verification/validation process is primarily automated; however the QAPP includes a provision for data review. Automated processes are not acceptable for organic analyses. Prior to requesting services for organic analyses, MK would require that DataChem analyst and supervisor perform a thorough review of

MORRISON KNUDSEN CORPORATION

Bonnie Lavelle

March 1, 2000

Page 3

the data to minimize the potential for false positives/negatives associated with computer error. A thorough review of the data by the DataChem project manager should also be done for compliance with client requirements. DataChem follows SW-846 standard procedures for initial and continuing calibrations that are outside control limits. Their Corrective Action Policy meets the VB/I-70 QAPP criteria. MK has received a competent QAPP from DataChem Laboratories.

Columbia Analytical Services

Columbia Analytical Services has been selected for their capabilities to analyze lead and arsenic in vegetable tissues. The QAM has 3-plus years experience as QAM at Columbia Analytical Services. The procurement of materials and services for use in analytical processes and traceability of standards meet the VB/I-70 QAPP Sect. 4.11 criteria. The employee training program addresses the requirements of the VB/I-70 QAPP Sect. 4.5. In accordance with RAC QAPP Sect. B3, sample handling procedures and custody requirements are acceptable. The MDLs for both arsenic (EPA 6020) and lead (EPA 6020) in vegetable tissue are 0.05 mg/kg. Columbia Analytical Services performs laboratory analyses according to established analytical methods. Laboratory QC requirements meet RAC QAPP Sect. B5.2 criteria. The data verification/validation process is consistent with VB/I-70 QAPP Sect. 4.13. Columbia Analytical Services follows SW-846 standard procedures for initial and continuing calibrations that are outside control limits. Their Corrective Action Policy meets the VB/I-70 QAPP criteria. MK has received a competent QAPP from Columbia Analytical Services.

If you have any questions or would like additional information regarding these laboratory programs, please call me at (303) 948-4674.

Sincerely,



Ellen McEntee
Project Chemist

cc: M. Green
B. Meyers